

Nebraska Local Energy Assurance Planning Workshop

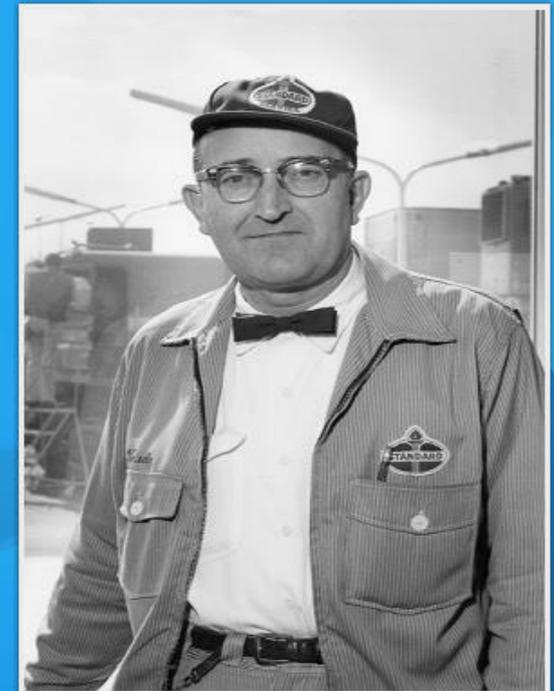
Gasoline, Distillate Fuel, Ethanol and Biodiesel

Zac Griess
Director of Petroleum



Bosselman Oil Inc.

- Bosselman Oil Inc. was started in 1948 by Fred & Maxine Bosselman
- 2019 marks our 71th year in business





BOSSELMAN ENTERPRISES

➤ 45 Pump & Pantry C-Stores in NE.



➤ 2 Travel Centers



➤ 46 Boss Shop Truck Repair Centers in 24 states



➤ 6 Hotels - 4 brands in 2 states



➤ 3 Restaurants brands



➤ 3 Quick Serve brands



1200+ Employees Nationwide

Gasoline, Distillate Fuel, Ethanol and Biodiesel

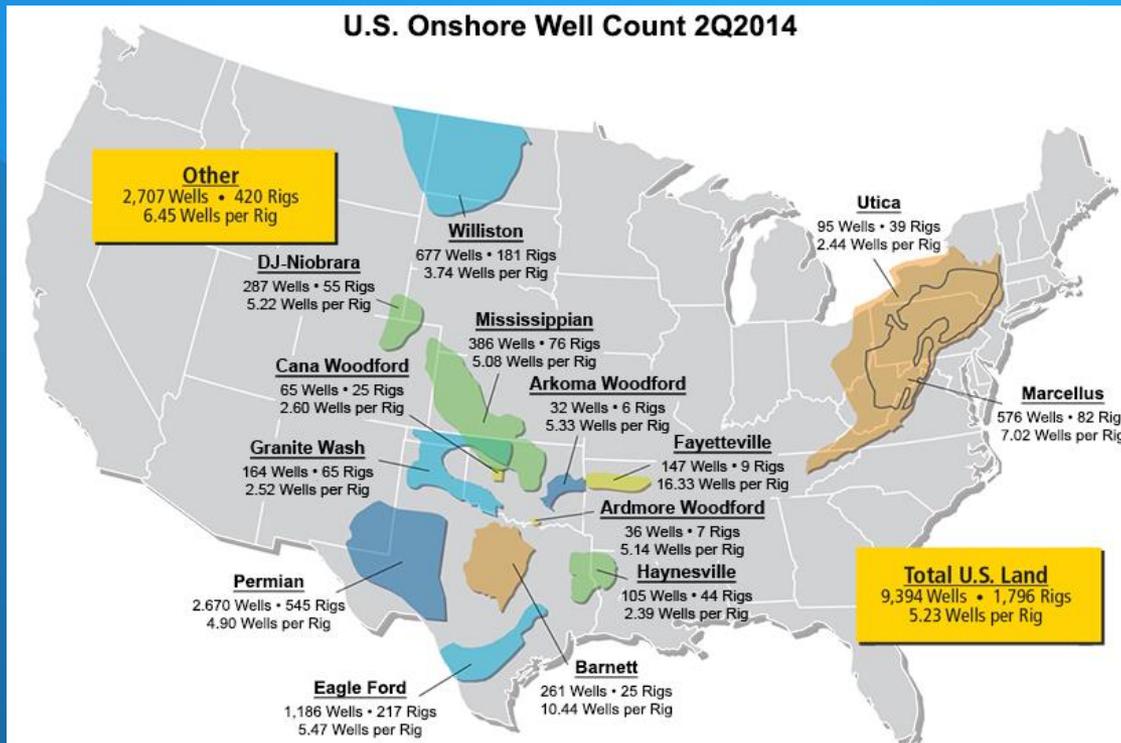
- **The “Fuel Chain”**
- **Ethanol and Biodiesel**
- **Responding to Fuel Shortages**
- **Recent Floods – Nebraska in Action**

The Fuel Chain

- How fuel goes from being a raw material such as crude oil to being a “finished” refined product such gasoline or diesel fuel.
 - Crude Oil
 - Refinery
 - Pipeline
 - Terminal or rack
 - Jobber or end user
 - Bulk storage or gas station

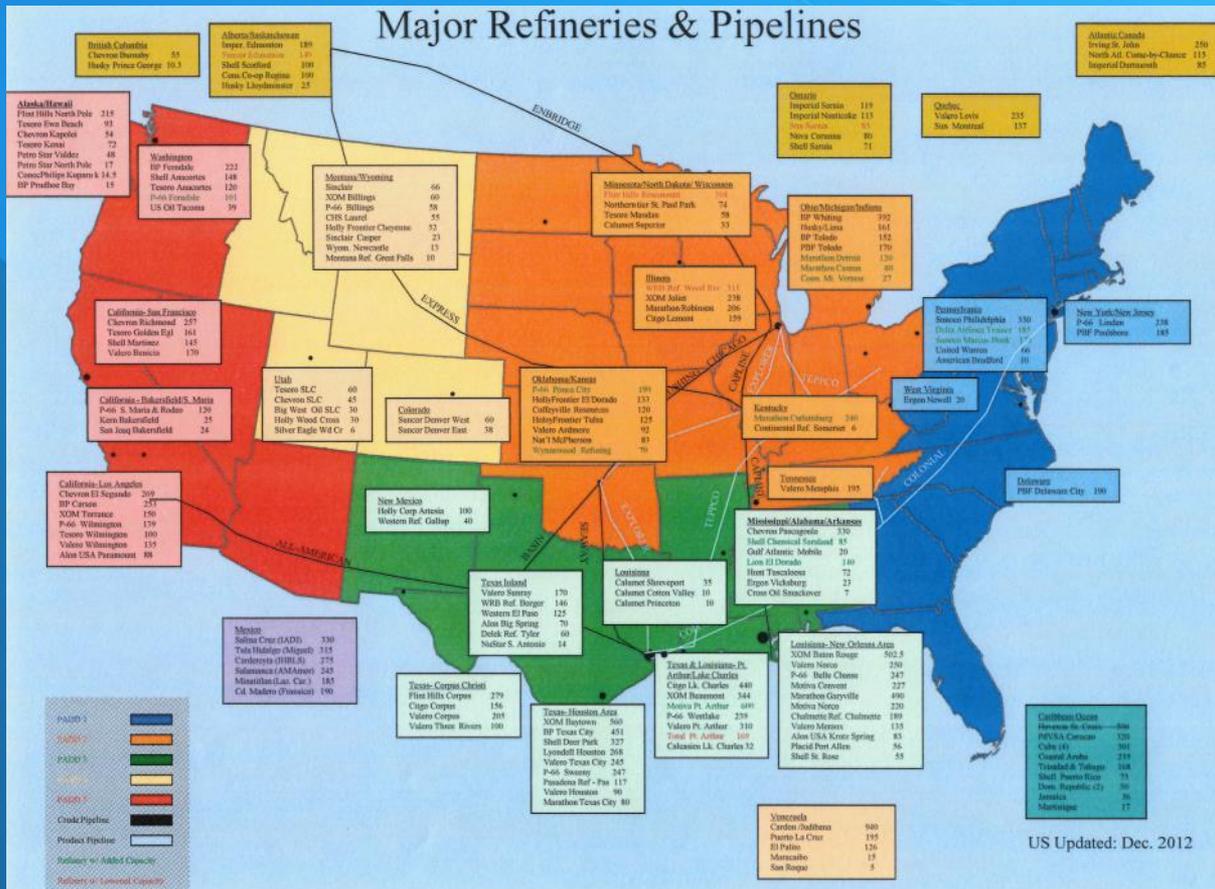
The Fuel Chain

- It all starts with crude oil, which comes from the ground, or from the ground under the sea.
- Crude oil is the primary feedstock used to produce a wide array of petroleum products, including heating oils, gasoline, diesel and jet fuels, lubricants, asphalt, ethane, propane, and butane.
- Once extracted, crude oil is moved from delivery point to the refinery by rail, water, or pipeline.



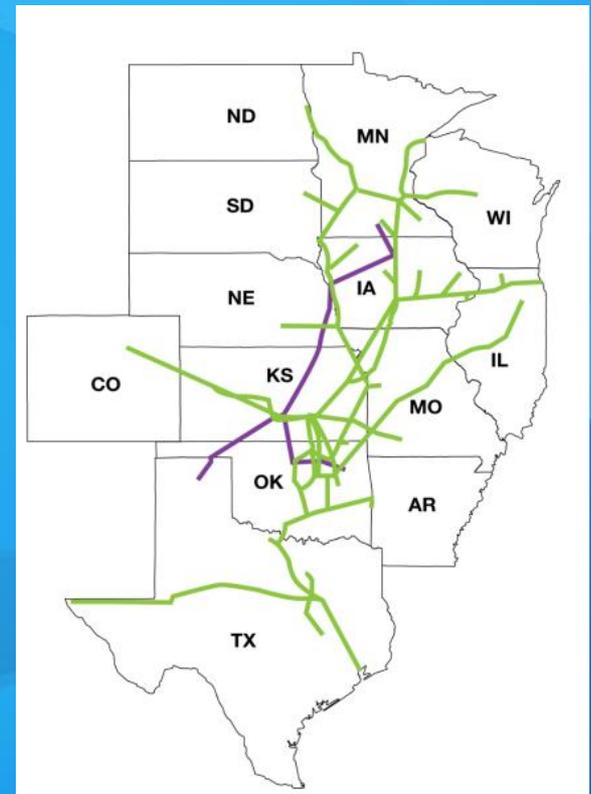
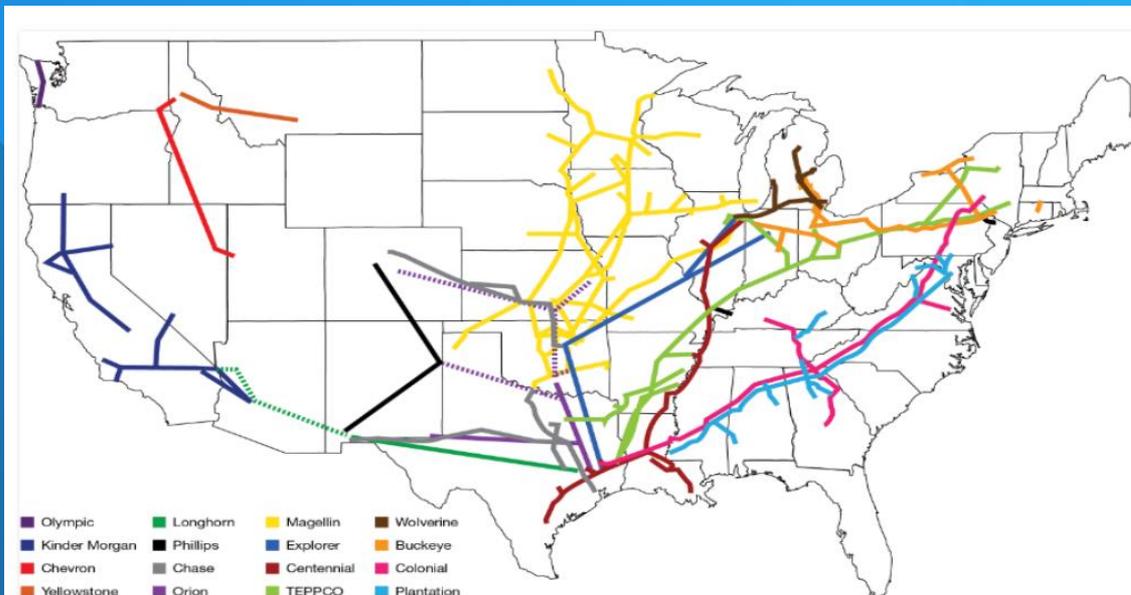
The Fuel Chain

- Refinery: An installation that manufacturers finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons and oxygenates.
- U.S. has over 135 operational refineries.



The Fuel Chain

- **Pipelines:** A network that allows crude oil, refined products and gas liquids to move across the country, usually from either refineries to terminals or from coastal locations to terminals and refineries further inland.
- For Nebraska, everything is pipeline connected from Cushing, OK.



The Fuel Chain

- Once in a pipeline, products will wind up in one of the terminal distribution points call a *terminal* or *rack*. This is where bulk fuel is stored and distributed.
- There are approx. 400 racks in the United States
- Racks are spread across the continental U.S. – The government splits the country into five distinct PADDs (Petroleum Administration for Defense Districts) which were set up for administration purposes in the event of allocations or government-implemented price controls.
 - PADD1 – East Coast
 - PADD2 – Midwest
 - PADD3 – Gulf Coast
 - PADD4 – Rocky Mountain
 - PADD5 – West Coast



The Fuel Chain

➤ In Nebraska, racks are located in or near the following cities:

- Columbus
- Doniphan
- Geneva
- Lincoln / Roca
- Norfolk
- North Platte
- Omaha/Bellevue
- Osceola
- Sidney



The Fuel Chain

- Once the fuel gets to the rack, the fuel is most commonly picked up by what the industry refers to as *jobbers*.
 - Jobbers are also referred to as fuel resellers, or fuel distributors.
 - A jobber is a middleman – someone who takes the fuel and either puts it in their own retail stations or resells it to other retailers.
 - The jobber can also resell fuel to end-users in different industries, or they can also “wet hose”, or mobile refuel.



Ethanol

- Ethanol **CANNOT** be shipped in a pipeline due to the risk of water contamination from the condensation present in petroleum pipelines.
- It is shipped from production plants – mainly located in the U.S. Midwest, to petroleum markets throughout the country by railcar.
- One of two things happen:
 - It may go to a terminal that exclusively holds and distributes ethanol.
 - It may go to a segregated tank at a petroleum terminal, where it will be blended with gasoline.



Ethanol

- Geographical position, abundant ethanol supply, and reliable, competitive rail transportation gives Nebraska a strategic advantage in serving ethanol markets.
- Nebraska is the No. 2 ethanol-producing state in the country.



Biodiesel

- Biodiesel is produced in the U.S. by using different feedstock's, including soy bean oil, canola oil, used cooking oil, animal fats, and corn oil extracted from ethanol plants.
- Biodiesel cannot be shipped in a pipeline that also carries turbine or jet fuel because of contamination issues.
- Biodiesel produced in the U.S. is moved by railcar to markets throughout the U.S.
- Biodiesel blending infrastructure in the U.S. is no where near as mature as the ethanol blending infrastructure.
- Most of the biodiesel blended in the U.S. is done outside the petroleum terminal – it is primarily splash blended.



Responding to Fuel Shortages

- Ensuring adequate fuel supplies is a key component in responding to energy emergencies.
 - Fuel allows emergency responders and utility workers to get where they need to be
 - Fuel allows residents to evacuate to get out of harms way
 - Fuel powers backup generators
 - Etc.

Responding to Fuel Shortages

- **Monitor petroleum supplies – Seek out accurate and timely information about petroleum supply, wholesale and retail prices and inventories for local terminals**
 - **Automobile Association of American and GasBuddy.com for example**
- **Coordinate with the private sector – Work with petroleum industry to address supply problems**
 - **If an emergency is expected, supply can be built up ahead of time**
- **Identify the need for assistance**
 - **Priority end-user programs**
 - **State of Emergency declarations**
 - **State and local transportation assistance**
 - **Assistance with deliveries along evacuation routes**
- **Be patient**

Recent Floods – Nebraska in Action



Recent Floods – Nebraska in Action

➤ Fremont – All roads blocked

- NE State Patrol, NE National Guard, NE Department of Transportation, and first responders worked together to organize a relief convoy.
- State Patrol contacted the fuel hauler at 12:30 PM to take a load of fuel into Fremont and gave them 3 hours to load fuel at terminal in Omaha and be at the Millard airport to be escorted into the flooded area.
- Hauler didn't know who they were hauling for or where it was going, but jumped in the truck and joined the convey.
- This continued for 2 days until a road in/out could be opened up and secured.





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ENTERPRISES

Thank You

